Appendix B
Meteorological Data

This section contains meteorological data derived from various regulatory and non-regulatory sites. The data provides a comparative analysis of winds speed, wind direction, wind gusts and concentration data. Please note that meteorological instruments measure at different heights, and at different time intervals. By taking, the actual time of measurement and assuring that all data represented is in Pacific Standard Time (PST) there is uniformity of the data. In addition, not all stations measure at the exact same time, i.e. measurements at 0:53 and 0:56 therefore, comparisons are measurements within a 60-minute period. While there may be some overlapping and slight differences the comparative analysis provides the reader with a better understanding of the regional effect of the Exceptional Event.

FIGURE B-1
METEOROLOGICAL SITES WITHIN IMPERIAL, RIVERSIDE, SAN DIEGO, AND YUMA COUNTIES

Fig B-1: A collection of meteorological and air quality monitoring sites used in this document. Base map from Google Earth

IMPERIAL COUNTY STATIONS
FIGURES B-2 THROUGH B-7

FIGURE B-2
IMPERIAL COUNTY AIRPORT (KIPL)
WIND SPEED, GUSTS & DIRECTION

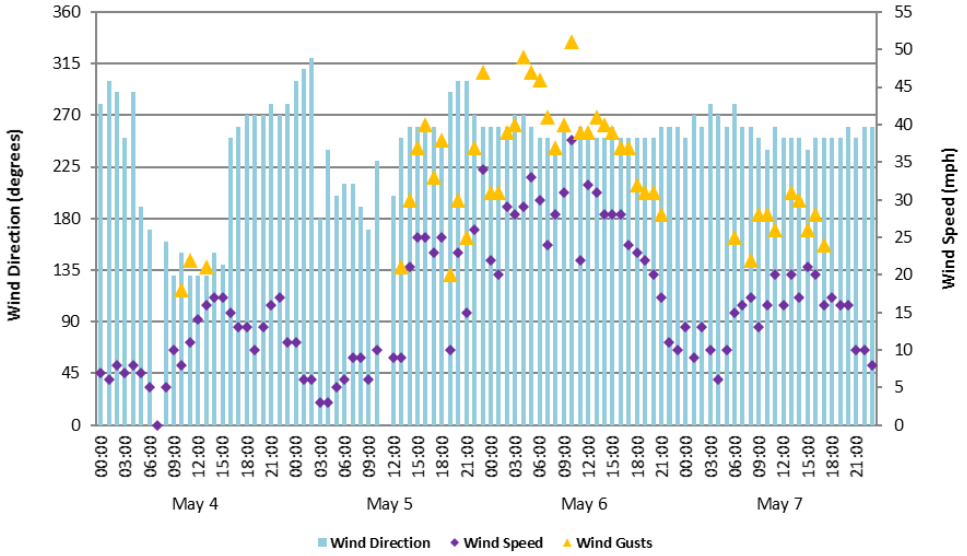
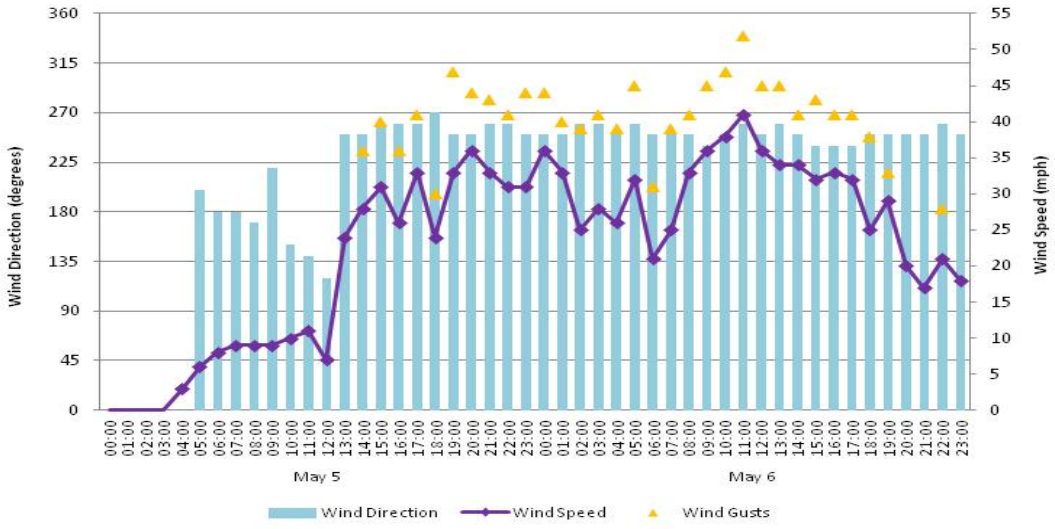


FIGURE B-3
EL CENTRO NAF (KNJK)
WIND SPEED, GUSTS & DIRECTION



Figs B-2 & B-3: Imperial Airport and Naval Air Facility meteorological data for May 5 and May 6, 2014, showing a dramatic increase in wind speed accompanied by gusts over 50 mph. Both locations are southwest of Brawley. Wind data from the NCEI's QCLCD data bank

FIGURE B-4
NILAND WIND SPEED & DIRECTION

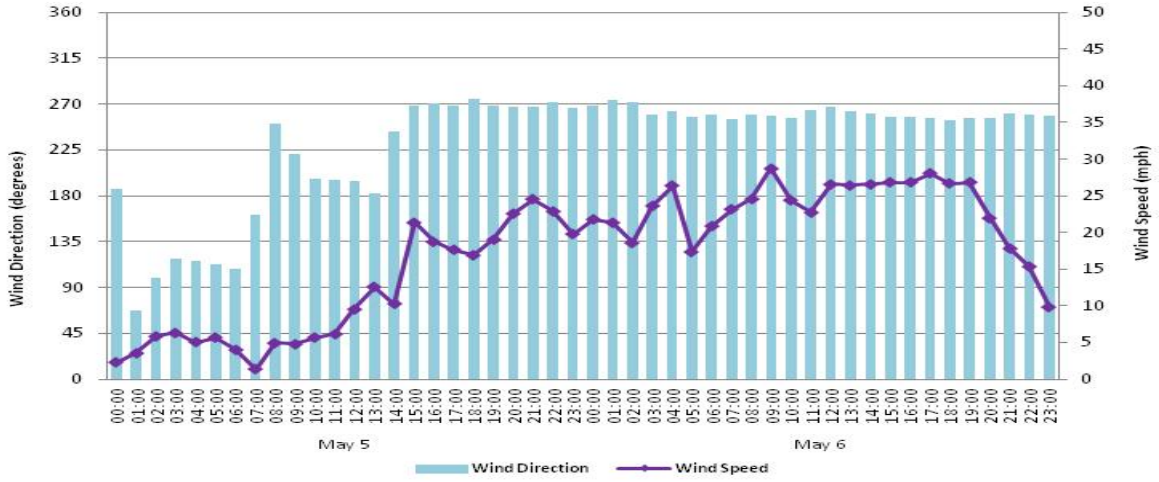


FIGURE B-5
CALEXICO WIND SPEED & DIRECTION

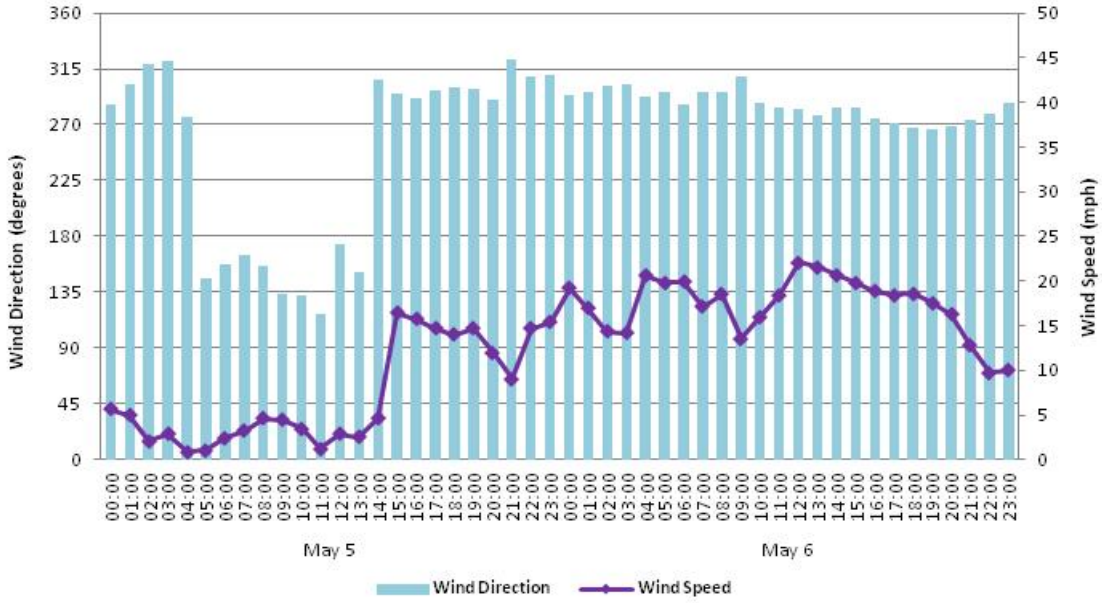
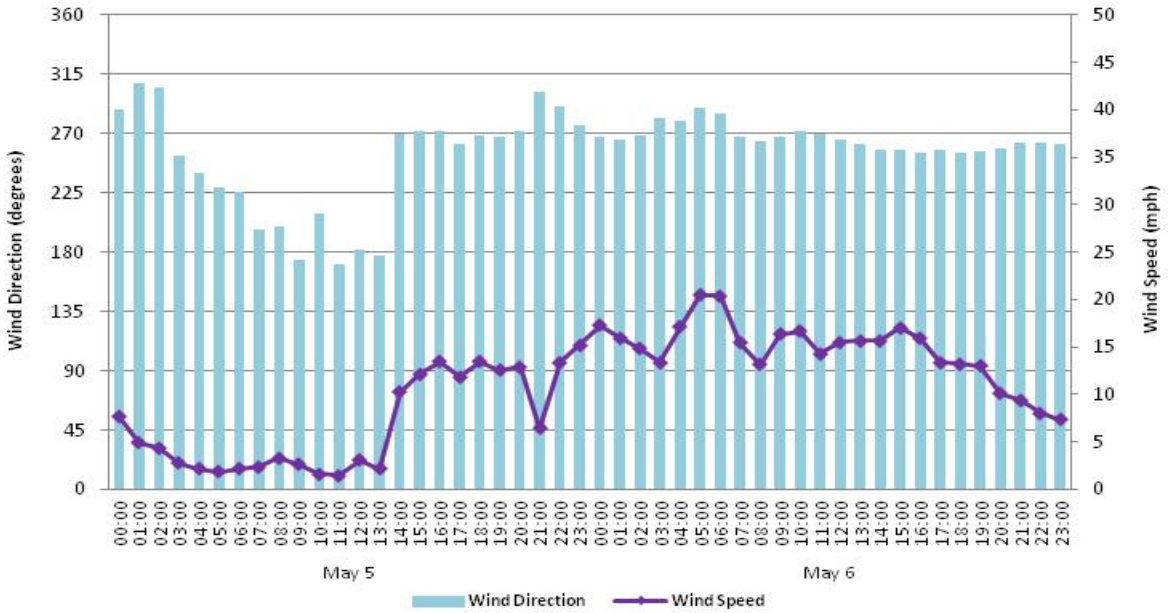


FIGURE B-6
EL CENTRO WIND SPEED & DIRECTION



Figs B-4 through B-6: The Niland, Calexico, and the El Centro monitors illustrated an increase in wind speed beginning the afternoon of May 5, 2014 and continuing through May 6, 2014. Wind data from the EPA's AQS data bank

FIGURE B-7
WIND ROSE FOR MAY 5, 2014 AND MAY 6, 2014 IMPERIAL AIRPORT

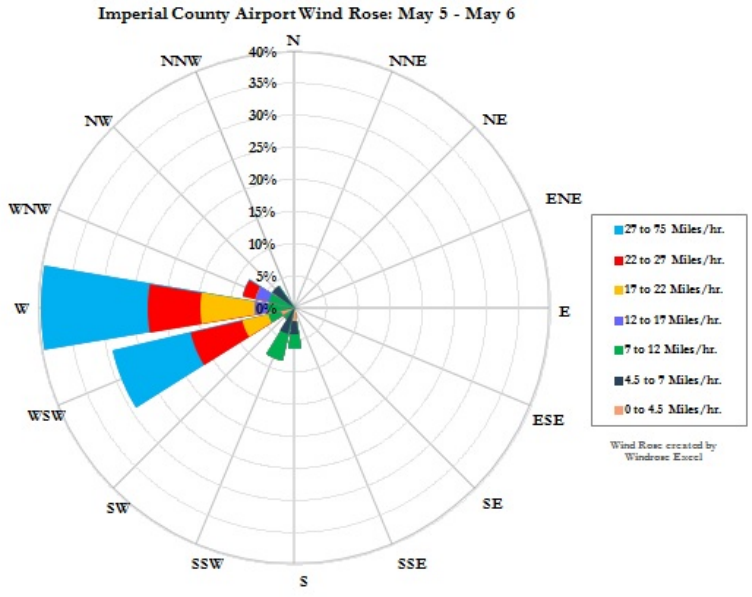


Fig B-7: The wind rose indicates a west and west-southwest winds

FIGURE B-8
WIND ROSE FOR MAY 5, 2014 AND MAY 6, 2014 EL CENTRO NAF

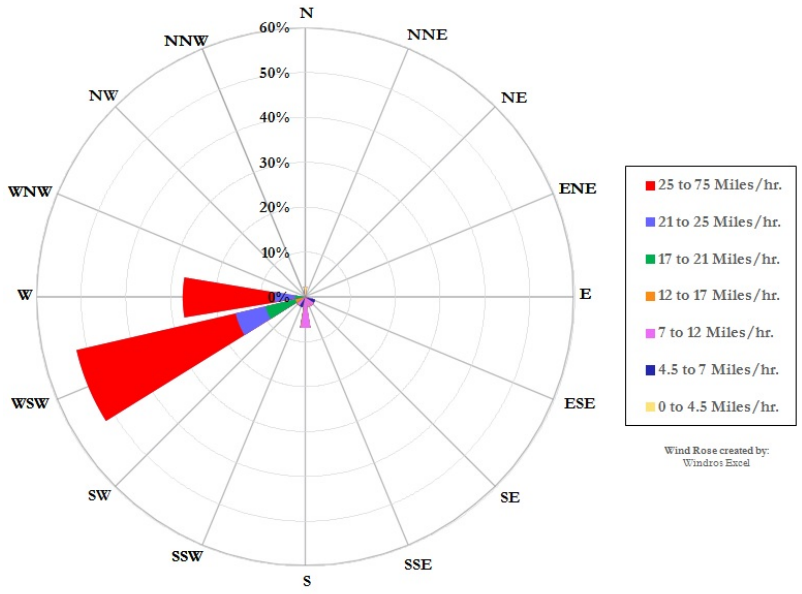


Fig B-8: The wind rose indicates a west and west-southwest winds

RIVERSIDE COUNTY STATIONS

FIGURE B-9
PALM SPRINGS AIRPORT (KPSP)
WIND SPEED, GUSTS & DIRECTION

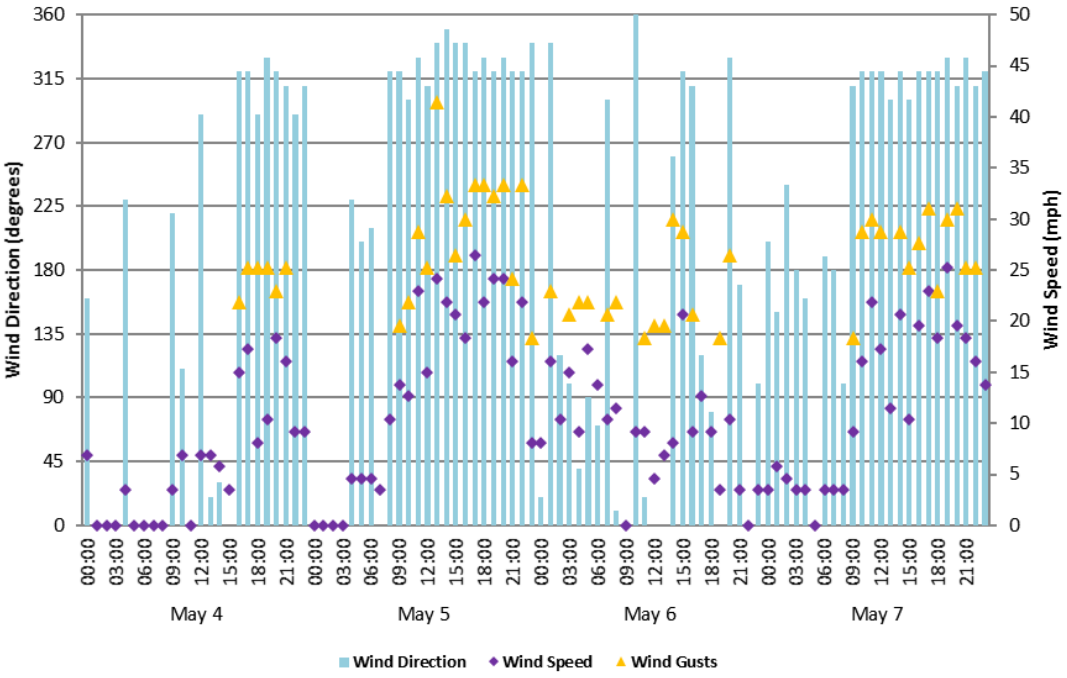


FIGURE B-10
BLYTHE AIRPORT (KBLH)
WIND SPEED, GUSTS & DIRECTION

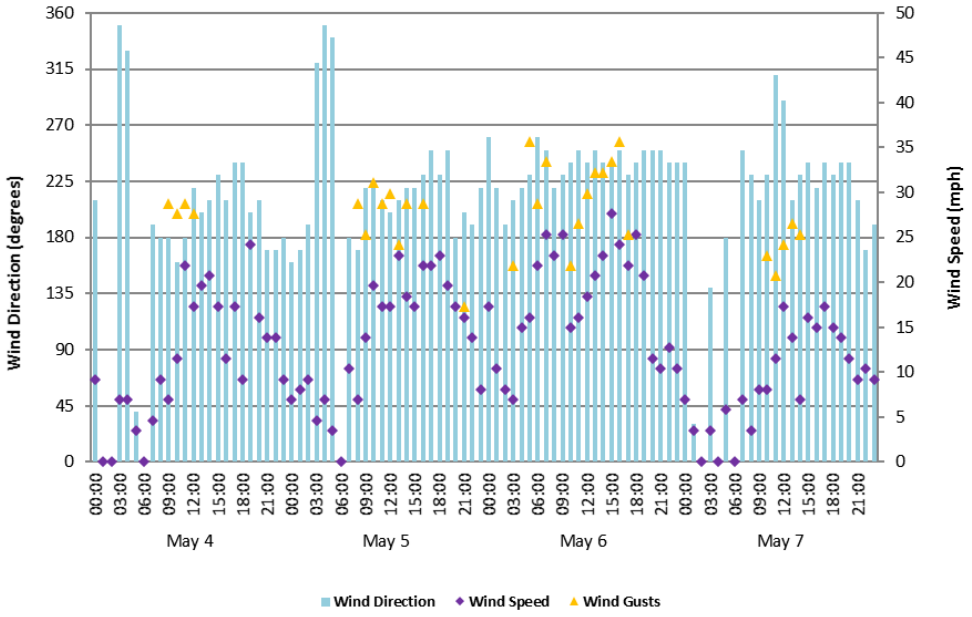
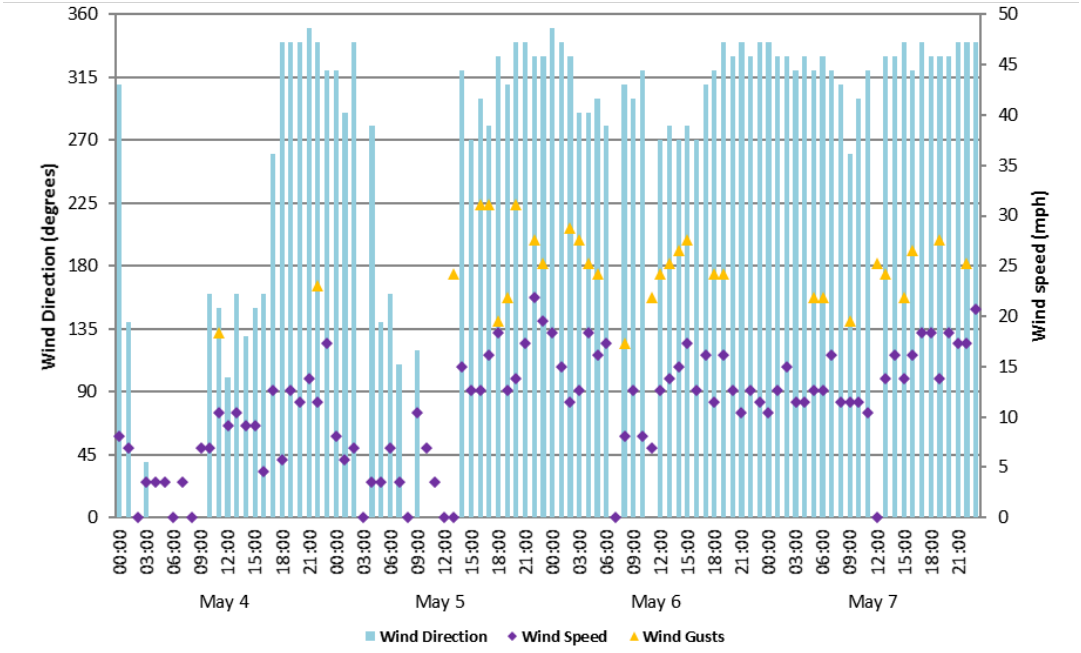


FIGURE B-11
JACQUELINE COCHRAN AIRPORT (KTRM)
WIND SPEED, GUSTS & DIRECTION



Figs B-9 through B-11: Palm Springs Airport (KPSP), Blythe Airport (KBLH), and Jacqueline Cochran Airport (KTRM) meteorological data for May 5, 2014 and May 6, 2014, show elevated wind speeds and wind gusts. All three are in eastern Riverside County. Wind data from the University of Utah's MesoWest data bank

ADDITIONAL STATIONS OUTSIDE OF IMPERIAL COUNTY

The following graphs provide evidence of the elevated wind speeds and confirm the prevailing wind direction at different sites outside Imperial and Riverside Counties

FIGURE B-12
YUMA (ARIZONA) MCAS (KNYL)
WIND SPEED, GUSTS & DIRECTION

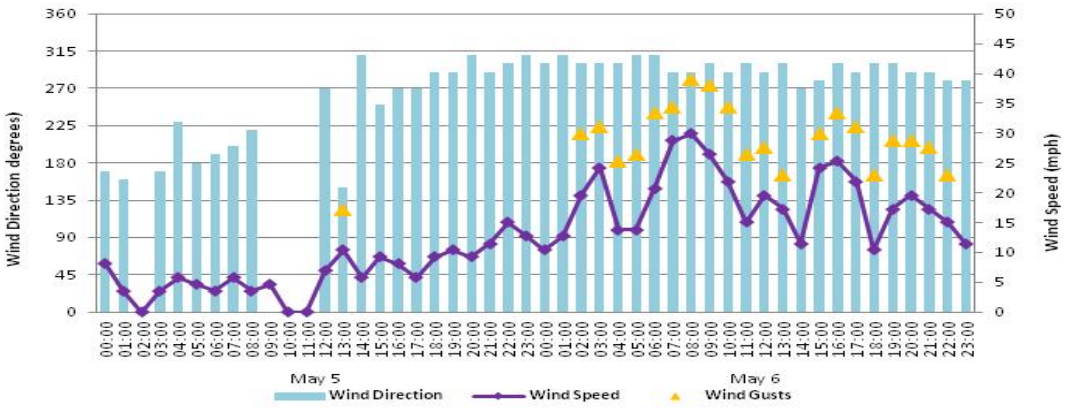


Fig B-12: Yuma MCAS is located downstream from Brawley and Westmorland in southwestern Arizona. Wind data from the University of Utah's MesoWest data bank

FIGURE B-13
CAMPO AIRFIELD (KCZZ)
WIND SPEED, GUSTS & DIRECTION

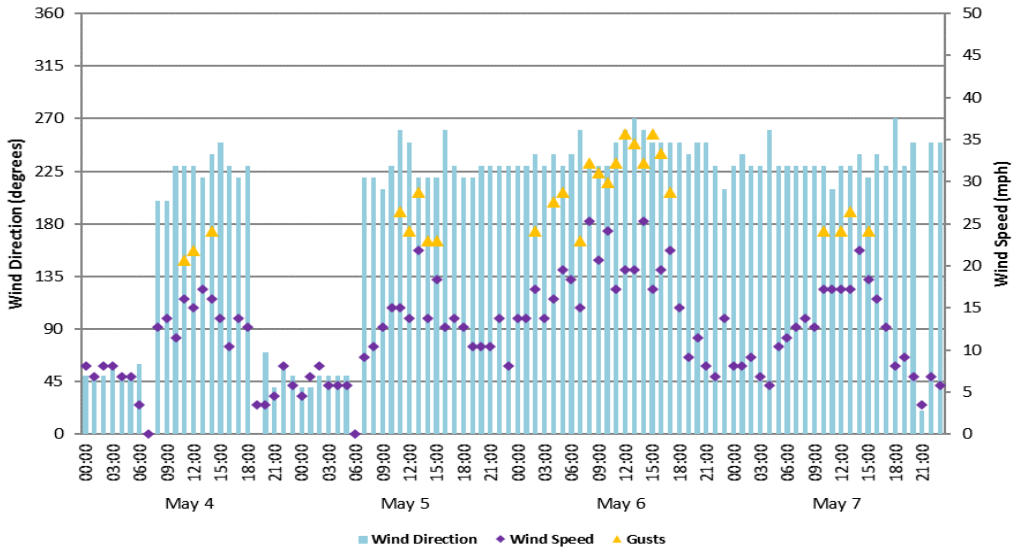


Fig B-13: Campo airfield is located in southeastern San Diego County. Wind data from the University of Utah's MesoWest data bank

ADDITIONAL STATIONS

FIGURE B-14
FISH CREEK MOUNTAINS
WIND SPEED, GUSTS & DIRECTION

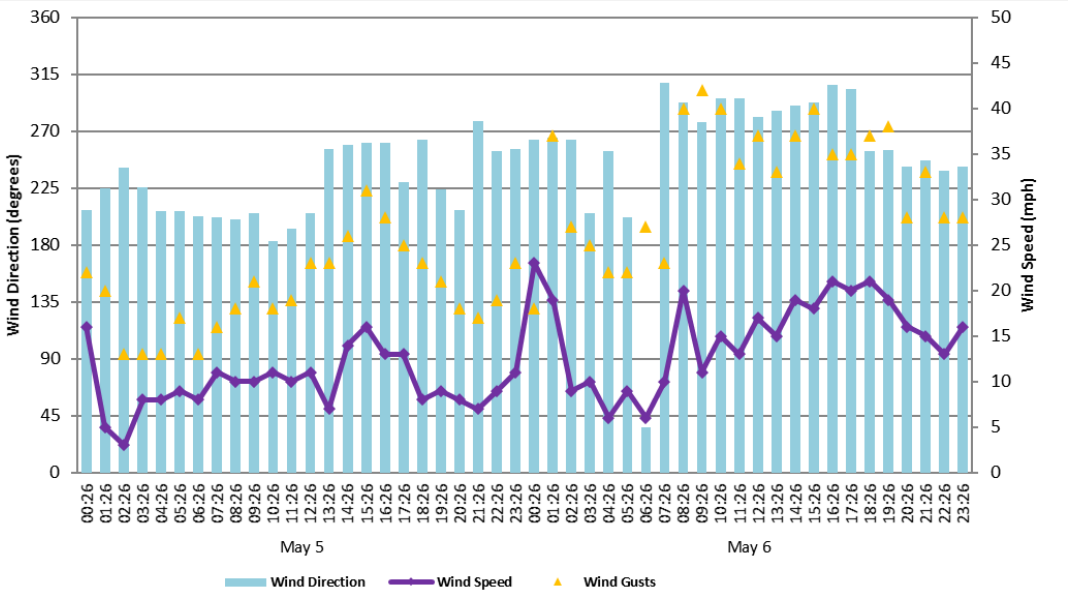


Fig B-14: The Fish Creek Mountains are located almost due west of Brawley. Wind data from the University of Utah's MesoWest data bank

FIGURE B-15
SUNRISE-OCOTILLO
WIND SPEED, GUSTS & DIRECTION

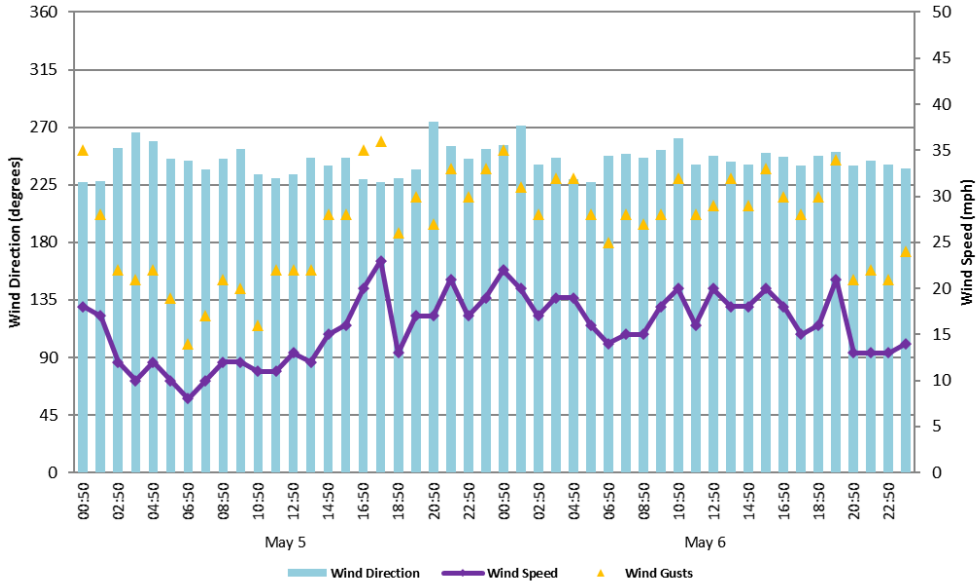


Fig B-15: Sunrise-Ocotillo is located southwest of Brawley and Westmorland. Wind data from the University of Utah's MesoWest data bank